

More sustainable, resilient, and competitive food systems through the development of intermediate food value chains



PRACTICE ABSTRACT No: 46

Sustainability Assessors' Guide: Implementing Multi-Criteria Analysis in Sustainability Evaluations

What?

Multi-criteria analysis (MCA) is a crucial tool for assessing sustainability performance in the fruit and dairy value chains, enabling simultaneous evaluation of environmental, economic, and social dimensions. In the FAIRCHAIN project, MCA is key to assessing innovations across diverse contexts, such as circular economy practices and prioritizing social cohesion. By integrating stakeholders' perspectives, MCA ensures that the assessment model reflects the priorities of industry, researchers, and consumers.

How?

- **Define Objectives and Criteria:** Outline sustainability goals and select indicators that reflect the stakeholders' priorities. For example, energy efficiency was crucial in one region, while social cohesion took precedence in another.
- **Stakeholder Engagement:** Involve diverse stakeholders early in the assessment to ensure that the model sufficiently reflects the industry's current challenges and societal concerns. FAIRCHAIN engaged 15 to 20 stakeholders per case study for context-specific evaluations.
- **Data Collection and Indicator Weighting:** Use methods such as the Analytical Hierarchy Process (AHP) to assign appropriate weights to the indicators. For instance, reducing the carbon footprint was critical in some regions, while others prioritized local procurement.
- **Scenario Analysis:** Develop and evaluate multiple scenarios—ranging from 2 to 5 different pathways—to explore potential sustainability impacts. This approach enabled FAIRCHAIN to thoroughly assess long-term outcomes.
- **Interpreting Results:** Use the results to identify strengths and weaknesses. FAIRCHAIN highlighted the importance of fitting business models and the valorization of co-products to enhance sustainability.

Why?

MCA ensures that sustainability assessments in the fruit and dairy sectors are comprehensive, accurate, and actionable. The FAIRCHAIN project's use of MCA identified key areas for improvement, such as the potential of intermediate value chains to reduce environmental impacts and enhance economic resilience.

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End Users

Professionals, researchers, and analysts involved in evaluating the sustainability of innovations, particularly within the food and dairy

Country

Worldwide



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ABOUT FAIRCHAIN

The FAIRCHAIN project launched in 2020 and coordinated by INRAE, is developing intermediate food value chains in the fruits and vegetable and dairy sectors. Through technological, organizational and social innovations and by developing business models FAIRCHAIN will enable small and mid-size stakeholders to scale up to supply fresh, sustainable and high-quality food products to consumers at a regional level.

FAIRCHAIN PARTNERS



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